



Green Pond Oil Spill Site Monitoring Program News

Prepared by The Eco-Strategies Group
For U.S. EPA Region II Oil Spill Removal Program

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Green Pond Oil Spill Site Vandalized

On my first visit to the Green Pond Oil Spill Site for the 2002 season, I noticed along with OSC Mike Solecki and WRS Response Manager that about half of the shrubs were missing from the wetland area. Upon closer examination we observed that the shrubs had been chopped close to the bases and hauled away. Initially,

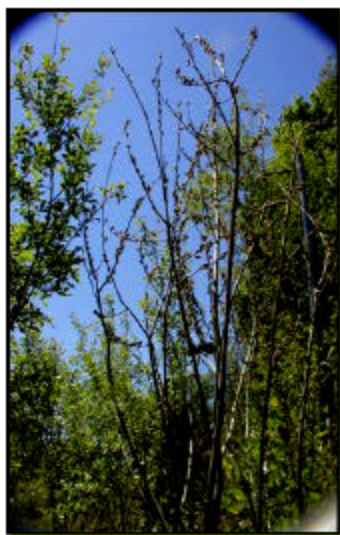


**Vandalized Shrub Stump
at the Green Pond Oil
Spill Site**

we blamed beavers. On subsequent visits to the site on May, 10th, 16th and 23rd, I realized that something was wrong with our premise. #1. Beavers gnaw around the stump evenly finally toppling the shrub when it no longer has the support to remain upright. The stumps at Green Pond had been hacked through at an angle. #2. We did not observe any trampled vegetation or trails that the beavers would have made to pull the brush off the site and into the water.

Evidently, the vandalism took place earlier this spring as I found one *Salix discolor* near the upland fence line

that had been cut down but left. This season's new leaf growth was still attached to the upper portion of the shrub (shown below).



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Special points of interest: Upcoming Issues.

- *More on the Biological Control Agents: Are the beetles working at the Green Pond Oil Spill Site.*
- *Status of the Oil Recovery Operations at the Green Pond Oil Spill Site*
- *Special Features at the Green Pond Site: Cultural and Ecological*

Mystery Visitor Frequents Green Pond Oil Spill Site

During my last two weekly visits to the Green Pond Site, I have observed the digestive remains of a very large animal. No tracks, just scat. On the 23rd, it was on the path leading down to the

marsh and this week (May 31st) there was a large deposit in the marsh just to the right of the gate.

Amazingly the perimeter fencing is still intact. The

only possible entry point is at either end close to the Pequonnack River where fisherman have cut the fencing in order to transgress the site.

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Mystery Visitor Frequents Green Pond Oil Spill Site *continued*

In past years, deer have entered the marsh in places where the fence was knocked down by falling branches or fishermen.

This spring, OSC Mike Solecki had the fence repaired and steel posts installed to replace the broken wooden stakes.

Now any intruders whether two or four legged have to use the holes at either end and get their feet wet in the process.



Scat from Mystery Visitor found on the marsh at Green Pond Oil Spill Site.

Date: 5-31-02 Scale marker = foot ruler

It is evident that the mystery visitor is having an ecological impact on the Green Pond Oil Spill site which necessitates careful observation throughout this season's Monitoring Program.

It could turn out that a new dimension may be added to the Monitoring Wetlands Handbook for monitoring wetlands in New Jersey if not the entire country.

Future developments will be reported in next month's Newsletter on the activities and ruminations of the Mystery Visitor.

2002 Spring Plant Survey completed

An integral task of the Monitoring Program for the Green Pond Oil Spill Site is the bi-annual plant survey. Every year since EPA initiated cleanup efforts, spring and an end-of-the-growing season plant surveys have been performed to delineate the plant communities and possible changes that may have occurred in the species composition.

Surveys of this nature are used by ecologists and environmental scientists to determine the natural changes that

occur in ecosystems and those changes that may be attributed to the presence of a contaminant, in this case, Pennsylvanian Crude oil present in the subsurface soils adjacent to the wetland. Oil can have a toxic effect on plants and certainly affect the capacity to germinate and grow. Under some conditions, refined petroleum products are used as herbicides to control weeds.

At the Green Pond Oil Spill Site, oil has occasionally erupted and contaminated limited areas of the marsh. Soil sam-



ples are collected in these areas and particular attention is given to the plants growing in these areas for signs of stress or changes in species composition.

Biological Control of Invasive Species at the Green Pond Oil Spill Site

Purple Loosestrife (*Lythrum salicaria*) an plant species introduced to North America a hundred years ago, is a pervasive alien to freshwater wetlands throughout the Northeast. Although striking when in bloom, it quickly outcompetes native wetland species in seed production and growth patterns to create a monospecies plant community.

Purple Loosestrife has been present at

the Green Pond site even prior to EPA's cleanup activities but following the initial removal of the contaminated soils, was not prevalent in the plant community.

In the past two growing seasons, it has become a dominant species in the central portion of the marsh. Late last season, a biological control agent, 800 *Galerucella* beetles were introduced to

the Green Pond Oil Spill Site by the New Jersey Bureau of Biological Control. Some effect was noticed but the beetles disappeared shortly thereafter. In June 2002, we will conduct an entomological survey to determine if the beetles are still present. If the numbers are low or non-existent, re-introduction will have to be considered